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ABSTRACT

To solicit students' views on teaching and learning in large classes, surveys were distributed to 143 students enrolled in an upper division general education and major course in communication theory in the fall of 1993. The survey consisted of 17 questions, 10 of which were closed-ended questions concerning demographics. The remaining seven were open-ended questions focusing on student likes and dislikes in large classes and their ideas for improving teaching and learning in large classes. The closed-ended portions of the survey were tabulated; the open-ended portions were analyzed through content analysis. Results showed that most students prefer small classes, but about one-third were favorable to large classes. The results also comment on a number of assumptions held by faculty about large classes. First, if many faculty believe that increased class size leads to decreased student learning and satisfaction, student assessment of their experiences of large classes clearly show that not all students share this belief. Second, if faculty believe that large classes cannot be taught like small classes implying that quality teaching is not possible in large classes, the data in this study suggests, nevertheless, that quality teaching is possible in large classes. Third, if faculty believe that student ratings of large classes (and large-class instructors) are lower than those of small classes, the close-ended question in which student ranked the communication class (at 8.05 of 10) suggest that ratings of large classes can be high. (Contains 35 references and 6 tables.) (TB)

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Learning Lessons from Large Classes: Student Attitudes Toward Effective and Ineffective Methods in Large Classes

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Abstract

In this time of diminishing resources, with potentially concomitant increasing class size, attention must turn to an identification of methods for maintaining the quality of teaching in large class settings. This paper reports on students' views regarding effective and ineffective teaching in large enrollment classes. After discussing three key beliefs about large classes and five challenges associated with large classes, student survey responses are presented regarding favorable and unfavorable attitudes toward teaching and learning in large class settings. Recommendations are offered to address some of the major concerns voiced by students in the survey responses.

Learning Lessons from Large Classes: Student Attitudes Toward Effective and Ineffective Methods in Large Classes

Large enrollment courses are a reality for faculty at many colleges and universities. Weimer (1987) notes that "faculty at many institutions believe that the number and size of large course sections are on the rise" (p. 1) although evidence to support this belief has not yet been presented. Offered in this paper are students' views regarding effective and ineffective teaching strategies used in large classes. Similar to perspectives taken by Gorham and Christophel (1992), and Kearney, Plax, Hays, and Ivey (1991), the focus in this research is on students' attitudes toward satisfactory and unsatisfactory methods used in college classrooms.

Chism (1989), in a review of research on large enrollment classes notes that although faculty do not always agree on what constitutes a "large class," researchers frequently define a large class as one with 100 or more students. Weimer (1987) argues that a large class is defined as one with 100 or more students because beyond 100 students, "the possibility of individual relationships between professor and student is precluded . . . not every student who wants to speak in class can be called on, and . . . grading essay exams can take up every evening and weekend of the course" (p. 2). In one study, students provided a similar definition of a large class. Wulff, Nyquist, and Abbott (1987) asked students to identify the point at which classes became large. Eighty-three percent of the students reported that classes became large at 75 students or more. In this study, a large class is operationally defined based on the size of

classrooms where the study was conducted. Students in the study typically take courses in classes with a maximum capacity of 35 students, a maximum capacity of 60 students, or a maximum capacity of 175 students. Using these limits, a large class is operationally defined as one with 61-175 students.

I begin this paper by reviewing the literature on teaching and learning in large classes. The discussion is organized into two main sections. First, I identify three common beliefs about large classes. Then, I identify several challenges believed to be in operation in large class settings. In my treatment of these beliefs and challenges, I review relevant literature to suggest methods for responding to challenges and limitations of large classes. Although we are starting to learn about methods for improving our teaching in large classes (see The Teaching Professor for frequent essays on the topic; also Weimer, 1987), much work remains. Here, I continue the work started by others by sharing insights my students have shared with me.

One belief that many faculty hold is that increased class size equals decreased student learning and satisfaction (McLeod, 1989; Wulff, Nyquist, & Abbott, 1987). At a recent workshop I attended on improving teaching and learning, faculty were asked to complete the sentence "teaching large classes is . . . " One respondent said that (teaching large classes) "reduces quality enormously." Another respondent felt that large classes "reduce interaction." In fact, of 30 respondents, 57% held negative attitudes toward large classes. Another 27% of the respondents were ambivalent about large classes.

Only 17% of the respondents were favorable to large classes.

Similarly, McLeod (1989) asked instructors of large classes to respond to the question, "large classes make it difficult to do what I would like because . . ." The responses were coded into three categories: affective factors (24%), effort required to teach (33%), and instructional effectiveness (43%). Student learning emerged as one key concern.

If we consider the views of students regarding their levels of satisfaction and learning in large classes, other points are noted. Wulff et al. (1987), in their research with 800 students report that "students have told us that the quality of instruction, not size, determines how successful classes will be" (p. 18). In a pilot study conducted on students' views on large classes, one student reported a similar position, "My basic view is that a good teacher can teach in any size class" (reported in Litke, 1993).

A second belief is that large classes can't be taught like small classes (see discussion in Gleason, 1986). Implied in this view is an underlying belief that quality teaching is not possible in large classes. Certainly, teaching large classes requires modifications on the part of the instructor (and students) (see Chandler, 1988). Nonetheless, I share the view of many scholars (see Aronson, 1987; Feldman, 1984; Marsh, Overall, & Kessler, 1979; Williams, Cook, Quinn, & Jensen, 1985) that effective teaching and learning can occur in the large class. In fact, as Harcharik (1993) found in her interviews with professors of large classes, opportunities and advantages are present in large class settings.

Many of the qualities that are valued in smaller classes--increased intimacy with students and their work, greater opportunities for student involvement, ability to incorporate greater variety of teaching methods, and greater variety of evaluative devices--also can be present in larger classes. For those interested in making the large class "feel smaller" (Gleason, 1986), numerous strategies exist.

A final concern of some instructors of large classes is that students' ratings of instructors of large classes are believed to be lower in large classes (see Harcharik, 1993). On the contrary, although this belief exists (see Scheck, 1978, p. 5), several reports have suggested that ratings of instructors of large classes may be as high as ratings of instructors of smaller classes (see Wulff, Nyquist, & Abbott, 1987). My experiences teaching large classes have produced ratings comparable to my ratings in my smaller classes, and a comparison of ratings from my large and small classes support Wulff et al.'s claim that (consistent with their experiences on their campus), "the best large classes can rival the best small classes on several instructional dimensions" (1987, p. 27).

Several more specific challenges confront instructors of large classes. Five key areas of concern are addressed here including concerns about impersonality, active learning, class participation, student evaluation, and reliance on lecture format.

First, large classes are perceived as impersonal classes (Aronson, 1987; Bostian, 1983; Chism, 1989; Knapper, 1987; Wulff, Nyquist, & Abbott, 1987) by many faculty and students. Lack of personalization does not necessarily go hand in hand with large

classes, however. Personalization is possible through a combination of adaptations and effort. Instructors need to demonstrate involvement in the class, the students, and the students' progress. The first step is making an effort to become acquainted with as many of the students as possible. Instructors should make it a point to call roll for the first few class sessions. Thereafter, in all interactions with the students (both in class and outside of class), the instructor should begin the exchange by asking the student to identify himself or herself by name. Materials returned to students could include a brief comment indicating recognition and/or support for the students' efforts or achievement, suggestions for improvement, or invitations to review work with the instructor during office hours. Through methods such as these the instructor communicates to the student that the student has been noticed.

Second, several scholars have addressed the need to guard against passivity among students in large classes (see Policy Perspectives, 1989). Instructors play an important role in facilitating active learning in classes (see Angelo, 1993; Bonwell & Eison, 1991; Boyer, 1990).

Knapper (1987) focuses on the need for maximizing learning in large classes and questions whether active learning is possible in large classes. He concludes that active learning can be achieved in large classes, but that issues of appropriateness become important considerations. For example, some faculty believe that large classes are best suited to lower division and introductory courses. Other faculty believe that only certain courses should be taught in the

large class format. Additionally, as Knapper notes, some faculty are better suited to teaching large numbers of students. As evident in the 30 faculty responses to the question "teaching large classes is . . . ", not all faculty enjoy teaching large classes.

Frederick (1987) focuses his article on involving students in large classes through active learning. He notes a tendency for faculty to rely on more passive methods such as lecturing, and offers three methods for fostering more active learning. First, faculty should incorporate a variety of strategies into their teaching (see Weaver & Cotrell, 1987 for specific suggestions). Second, visual reinforcement should be used to enhance learning in large classes. Third, professors need to incorporate "spaces" into their material so that students will have to complete the spaces, and participate more actively in the learning process.

Other suggestions offered address the use of interactive lectures (see Frederick, 1987), the use of questions to foster involvement (see The Teaching Professor, February, 1990), the use of small groups in large classes (see Weaver, 1983), the encouragement of problem solving and critical thinking, and the need to include the whole class in class debates, role playing activities or simulations.

A third area that poses challenges to some instructors of large classes involves student participation. Some faculty complain that large classes "make it difficult for each student to participate in the learning process." Certainly, from the standpoint of time, increased class size can reduce the possibility for individual responses. Another concern involves reluctance on the part of some

students to speak up in such a large group.

Faculty can initiate strategies to help students to increase participation in large classes. Weaver and Cotrell (1987) offer a number of methods for increasing student participation including the use of rhetorical questions (a rhetorical question can generate student involvement without taking time for individual responses), show of hands, direct questions, short surveys, dyads, triads, and small groups (p. 60). Many teachers of large classes believe that environmental constraints limit the extent of group participation possible in large classes. This is not necessarily true. I have taught large classes in theater type setting, with seats banked and bolted to the floor, as well as in large lecture halls with movable desks. In all settings, I have used groups (both short term and semester long collaborative projects) to facilitate student involvement and learning.

Another major area of concern for many large class instructors involves evaluation and assessment (see The Teaching Professor, June/July 1993). A common belief is that large lecture courses require unquestioning allegiance to multiple choice/Scantron type exams. Many students, if asked to describe the format of large lecture courses will respond that "professors lecture and students take multiple choice exams." If, however, students are asked about variations from this expected lecture/multiple choice exam format, most students can provide examples of tremendous creativity initiated by some professors in large classes. (This point is readily apparent in over 1000 student surveys I have collected in which students have

reported on professors' use of a range of creative techniques.) Hence, large classes do not have to rely on the expected lecture/ multiple choice exam format (although many do).

For instructors interested in incorporating alternative methods into their teaching in large classes, Weimer's 1987 collection of articles and the bibliography at the end of the book (Weimer & Kerns, 1987, pp. 97-103) should prove most useful. The reader also is directed to Buchanan and Rogers' (1990) article "Innovative Assessment in Large Classes" which addresses a number of important issues. Here, I would like to explore in greater depth the issue of evaluation of students.

It is true that, with 100 students in class, grading lengthy essay exams "can take up every evening and weekend of the course" (Weimer, 1987, p. 2). However, this does not mean that writing can not be used in large classes. One professor of journalism reports on his use of writing assignments in a journalism writing course for non-majors (Bostian, 1983, pp. 8-10). Enrollment is 100-150 students; the instructor has the help of two to three graduate assistants. Bostian notes that a "class of 150 is obviously not ideal for teaching writing" (p. 8). Nonetheless, students in Bostian's course are given twelve graded writing assignments, and six non-graded ones. Bostian outlines some of his advice on how to incorporate writing into the course (and still maintain one's sanity): (1) provide clear guidelines for the assignments; (2) make grading policies explicit; (3) provide written instructions regarding due dates and return dates; (4) return writing assignments promptly; (5) discuss papers of higher

quality in class with the aid of an overhead projector; (6) encourage students to seek the help of the instructor, teaching assistant, or other facility on campus.

Related to evaluation is the important role of assessment in large classes in opening lines of communication between teacher and student (see Murray, 1987). For instructors interested in specific techniques for assessment, the Angelo and Cross handbook Classroom Assessment Techniques: A Handbook for College Teachers (1993) provides numerous ideas. These techniques are of tremendous value in helping the large class instructor to "remain aware of the pulse of the class throughout the semester" (Brooks, 1987, p. 39). Also of interest is Weimer's (1990) discussion of the role of ongoing assessment and feedback in effective college teaching.

The final area of concern involves the belief that lecturing must be (or should be) the primary means of instruction in large classes. Weimer notes, "Too often, instructors in large courses resign themselves exclusively to lecturing" (1987, p. 2). Frederick (1987) observes that "nearly all learning theorists, faculty development consultants, and reports on higher education recommend the importance of interactive, participatory student involvement for learning" (p. 45). He goes on to note that "despite these recommendations, most college and university professors in most classes most of the time continue to lecture" (p. 46). A similar claim is made by Barnes (1984) and Bunnell and Eison (1991) with regard to reliance on lecturing and passive learning.

Gibbs's (1992) model of eight problem areas that develop with

increased class size identifies the use of structured lectures as one example of a control strategy used in large classes. On the other end, the "independence strategies" pole, are alternative forms for instruction including student-led seminars and team assignments. A key point in Gibbs's discussion is the need for recognition of the polar possibilities, as well as attempts to achieve balance between these extremes. (For a summary of Gibbs's 1992 model, see the June/July 1993 issue of The Teaching Professor.)

Indeed, lecturing is an important element of classroom instruction. But in large classes especially, there is a tendency to rely religiously on the lecture format. Frederick (1987) proposes three themes (discussed earlier), two of which are useful here as well. He argues that teachers should (1) use a variety of strategies (and incorporate 20-minute "energy shifts" into the course), and (2) use visual reinforcements.

Other strategies include the use of brainstorming, instructor explication of reading material with class, audiovisual methods, speakers, class debates, role playing (see Frederick, 1987), the use of small groups (see Frederick, 1987; Weaver, 1983; Weaver & Cotrell, 1987), computer based instruction (see Knapper, 1987), show of hands, short surveys, use of rhetorical questions, half-sheet responses (see Weaver & Cotrell, 1987), in-class writing assignments, and classroom assessment techniques (see Angelo & Cross, 1993). Certainly, interesting lectures are important, but also valued is a variety of methods.

Thus far, I have reviewed literature pertaining to three common

assumptions about large classes (increased class size translates to decreased student satisfaction and learning, large classes can't be taught like small classes, and student ratings of instructors of large classes are lower than student ratings of instructors of smaller classes). I also have reviewed the literature with regard to five key challenges confronting large class instructors: (1) impersonality of large classes; (2) active learning; (3) class participation; (4) evaluation and assessment; and (5) use of a variety of methods besides lecture only format. In reviewing the literature, I have attempted to respond to some of these concerns by suggesting solutions found in the literature, solutions suggested by faculty colleagues, and/or suggestions I can offer based on my experiences in my classes. In the next section, I widen the discussion by incorporating students' views regarding teaching and learning in large classes. Specifically, I analyze survey responses in which students offer their views regarding their attitudes toward teaching and learning in large classes.

Method

To solicit students' views on teaching and learning in large classes, surveys were distributed to 134 students enrolled in an upper division general education and major course in communication theory in Fall 1993. The last week of classes, surveys were distributed to students whom were given the option of completing the surveys or an equivalent alternative assignment for 1% extra credit in the course. Respondents were instructed to provide their names on the cover sheet only. Surveys were due by the end of the semester to the

department secretary or to a designated graduate student teaching assistant (not associated with the course). A total of 126 surveys (out of 134) were returned for a 94% response rate.

The survey consists of 17 questions, 10 of which seek more closed-ended and demographic type responses (e.g., respondent's major, sex, year, prior experience with large classes, etc.). The remaining seven questions seek more open-ended type responses and focus on student likes and dislikes in large courses taken from other instructors, their likes and dislikes in the large communication course, and their ideas for improving teaching and learning in the communication course and in other large courses.

The closed-ended portions of the survey were analyzed and tabulated. Responses to the open-ended questions were analyzed through content analysis. Given the nature of the data, as well as my purpose in collecting the data, my concern was for devising a broad enough coding system to encompass all the responses. The coding system is comprised of seven main areas: (1) group interaction in the classroom; (2) individual interaction between instructor and student/ personalness; (3) instructor style; (4) use of class time; (5) evaluation of students; (6) environmental issues; and (7) other/ not applicable (items in the coding system can be found in Table 5 and Table 6). These seven main categories are further divided into 57 subcategories. Units were coded at the subcategory level. This coding system, consisting of seven main categories and 57 subcategories, was used to categorize the responses of 126 students to six open-ended questions. (An analysis of four of these

six open-ended questions is offered here. The other two questions focus on student recommendations and are beyond the scope of this paper.) For the purposes of coding the responses, the unit of analysis consists of each phrase, sentence, or paragraph which addresses a separate aspect related to teaching and/or learning in large classes. Thus, one sentence could be coded into two subcategories if each phrase represented a conceptually different aspect of teaching and learning in the large classroom. In all, 1,332 units were coded into 57 subcategories. All responses were coded (or coded into the "other/no-response/not applicable subcategory"). Each unit was coded into only one subcategory.

Results

Demographic data on respondents is reported in Table 1 through Table 4. Information regarding students' major is found in Table 1. Respondents' sex is listed in Table 2. In Table 3, students' year in school is listed. In Table 4, students' prior experience in large course classes is indicated.

Insert Table 1 about here

Insert Table 2 about here

Insert Table 3 about here

Insert Table 4 about here

Respondents were asked to provide an overall satisfaction score (on a scale of 1 to 10, with 10 being the best) for the communication class. Responses ranged from a low of 3 (1.6%), to a high of 10 (13.5%) with a mean score for overall satisfaction of 8.05 (out of 10).

The final closed-ended question asked respondents to indicate their preferences with regard to class size. Students were asked, if allowed to choose between a small class (25-30 students), a medium class (31-60 students), a large class (61-175 students), or a mass class (over 176 students), what would be their first, second, and third choices. (These limits were used as they correspond with typical classroom sizes for students in the study.). The majority of respondents (56.6%) reported a preference for small, then medium, then large courses. The second ranked response--medium, small, then large--was chosen by 16.4% of the respondents. Another 9% of the respondents noted a preference for medium, then large, then small classes. Interesting to note here is that 31% of the respondents listed large classes as their first or second choice (7% as first choice; 24% as second choice).

Thus, the closed-ended portion of the surveys revealed several important characteristics of the group. The class was diverse with regard to major. Females outnumbered males considerably. The class consisted primarily of juniors and seniors (almost equally divided). The majority of these juniors and seniors reported previous experience with other large classes, either at the same university, or at other universities or colleges (or both). Students reported satisfaction

with the communication course. In terms of preference for small, medium, large, or mass courses, there was a clear preference for smaller classes, but about one-third of the students were favorable to large classes.

As can be seen from examining the closed-ended portions of the surveys, large classes are a reality for many students on many campuses. Not all students evaluate large classes negatively. In the next section, students' responses to the open-ended portions of the survey are discussed.

A summary of results of the content analysis of open-ended questions is found in tables 5 and 6. Summary data listing the most frequent favorable responses is found in Table 5; summary data of the most frequent unfavorable responses is found in Table 6. Included in Table 5 and Table 6 are the top ranked main categories and the top ranked subcategories within the top ranked main categories.

Insert Table 5 about here

Insert Table 6 about here

Discussion/Recommendations

Instructor style emerged as one main area of student concern (see Table 5). Many of the responses here addressed the skill of the instructor in teaching large classes. Also noted was the need for clear explanations given the reduced time to deal with student questions. The ability to engage students in lectures and to incorporate variety into the course also were valued. Methods for

achieving this variety included the use of guest speakers and group activities. Another way to maintain student interest was through the professor's involvement in the course.

A second main area of importance involved the use of class time, particularly with regard to course content and materials (see Table 5 and Table 6). Respondents commented favorably on the value of the readings and the impact of the texts. The frequency of comments suggests the central role of text choice, especially in large classes where engaging materials are needed to motivate students. Another related aspect is the need to be realistic about the amount of material that can be covered. The number of students' contributions and questions frequently cuts into the time available.

A number of comments related to the central role of group interaction in the classroom (see Table 5 and Table 6). Students addressed the importance of being encouraged to contribute to class discussions. Interestingly, this area emerged high on the unfavorable list also. One group of responses cited the lack of time for comments, but felt that class input was of value. A second group felt that instructors needed to take greater efforts to encourage student input, but that such input was of value. The third group felt that student comments frequently were irrelevant. This (small) group did not value class interaction.

One area of concern under group interaction was the presence of distractions and lack of respect for other students' attempts to learn (see Table 6). The concern here was not about the ability to hear (coded under acoustics), but about the inability to stay focused

on the material due to other distractions in large classes (e.g., note passing, newspaper reading, late arrivals, etc.). Of particular concern (even to "front row students") were the difficulties students in back rows had with filtering out the many distractions in large classes. Instructors were advised to lecture from various parts of the room and to remind students periodically of the need for courtesy of fellow classmates in the large class setting.

The large number of students was seen as facilitating climates of diversity and inquiry (see Table 5). Many respondents noted that as the number of students in the class increased, so too did the possibility for increased exchange of experiences, opinions, viewpoints, and learning.

In the category of individual interaction/personalness (see Table 5 and Table 6), students commented on difficulty in establishing a personal relationship with the professor and on the need for more one-on-one interaction. Increased office hours (and required meetings with students) were suggested as two methods for developing such relationships.

There was clear recognition that large classes make it more difficult to learn students' names. However, a key point in many of these comments was the students' appreciation of the attempt made on the part of the instructor to learn students' names. Without such efforts, students wrote that they felt like "cattle," "social security numbers," and "herds of animals." One way to personalize the class was through the instructor's use of personal examples. Students felt they benefited from seeing connections to their own experiences.

One final area of concern involved environmental constraints related to acoustics (see Table 6). Respondents commented negatively on poor microphones, inability to hear student comments, and the presence of numerous auditory distractions in large classes. To address these concerns, instructors might use cordless microphones, repeat key ideas in lectures and student comments, use visual reinforcements (such as the board), and be aware of the extent of auditory disruptions in large classes.

Conclusion

Thus, I have discussed some important findings with regard to responses provided by students about effective and ineffective methods in large classes. I began this paper with a discussion of three beliefs shared by many faculty about large classes, and five challenges that confront instructors of large classes. I return to these issues at this time.

First, it was noted that many faculty believe that increased class size leads to decreased student learning and satisfaction. Based on students' assessments of their experiences in large classes, it is clear that all students do not share this belief. Students can learn in large classes and some students report that large classes have yielded favorable experiences. Of importance here is listening to what students have to say about large classes and using this information to further enhance learning for students in these classes.

A second belief shared by some faculty is that large classes cannot be taught like small classes. The data in this study suggest

that quality teaching is possible in large classes with necessary adaptations.

Third, some faculty believe that student ratings of large classes (and large class instructors) are lower than ratings of smaller classes. Although no attempt was made to compare ratings of large and small classes, the closed-ended question where students ranked the communication class (at 8.05 out of 10) suggests that ratings of large classes can be high. Second, the fact that more favorable points were noted in the responses (524 versus 392 for unfavorable) indicates a willingness to comment favorably about large classes. Third, a review of the favorable assessments provided by students gives support to the range and depth of these favorable assessments.

Five specific challenges in large classes also were identified earlier in the paper (impersonality, active learning, class participation, evaluation, and reliance on lecture format). A review of the data suggests that these factors can in fact be obstacles for students in large classes. On the other hand, students' responses suggest that these obstacles can be overcome by instructors interested in improving teaching and learning in large classes.

Large classes are a reality for students and professors. In the future, it is likely that students will be involved in even greater numbers of large enrollment courses. As instructors, we need to consider the views of students regarding their preferences in large class settings. In this regard, we stand to learn important lessons from our students.

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Table 1

Major

Speech Communication	36.5%
Deaf Studies	11.9%
Health Education/Admin.	8.7%
Liberal Studies	5.5%
Business	4.8%
Psychology	4.0%
Other (from 20 different departments)	28.6%
	100.0%

Table 2

Sex

Female	69.8%
Male	30.2%
	100.0%

Table 3

Year in School

Senior	50.0%
Junior	47.6%
Sophomore	2.4%
	100.0%

Table 4

Prior Experience with Large Class

Had Large Class Before	84.9%
Did Not Have Large Class Before	15.1%
	100.0%

Table 5

Summary of Percentages for Top Ranked Main Categories and Top Ranked Subcategories Within Top Ranked Categories for Favorable Items

III. Instructor Style (main category = 27.0%)	
Instructor overall style	6.1%
Clarity of explanations	5.0%
Interesting lectures	4.2%
Enthusiasm/involvement in course	3.6%
	18.9%
IV. Use of Class Time (main category = 24.5%)	
Content/materials/subject	9.9%
Use of guest speakers	4.2%
Use of group activities	3.0%
	17.1%
I. Group Interaction in the Classroom (main category = 19.7%)	
Class participation	8.2%
Climate of diversity	3.4%
Climate of inquiry	3.2%
	14.8%
II. Individual Interaction/ Personalness (main category = 9.8%)	
Attempt to learn students' names	3.6%
Use of personal examples	3.2%
	6.8%

Main Category = 81.0% (in four main categories)

Subcategories = 57.6% (in twelve subcategories)

Table 6

Summary of Percentages for Top Ranked Main Categories and Top Ranked Subcategories Within Top Ranked Categories for Unfavorable Items

IV. Use of Class Time (main category = 20.2%)	
Pace/amount of material	6.4%
Content/material/subject	5.1%
	11.5%
I. Group Interaction in the Classroom (main category = 20.1%)	
Class participation/contributions	11.2%
Distractions	4.8%
	16.0%
II. Individual Interaction/ Personalness (main category = 18.9%)	
Attempt to personalize	9.2%
Interest in individual students	5.6%
Attempt to learn students' names	3.8%
	18.6%
VII. Other (main category = 16.9%)	
No response/not applicable	5.9%
Negative experiences with large classes	5.6%
Positive experiences with large classes	5.4%
	16.9%
VI. Environmental (main category = 12.2%)	
Acoustics	5.6%
	5.6%

Main Category = 88.3% (in five main categories)

Subcategories = 68.6% (in 11 subcategories)